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Name: \_\_\_\_\_

D ,

Date: \_\_\_\_\_ Per: \_\_\_\_\_

Definition – is a statement of the precise meaning of a term.

**D** \_\_\_\_\_

**A A** – are two angles in the same plane that have a common vertex and a common side, but do not have any interior points in common.

**A** – is a line segment drawn from any vertex of the triangle, perpendicular to and ending in the line that contains the opposite side.

**A B** – is a line segment that bisects any angle of the triangle and terminates in the side opposite that angle.

**B** – is a ray whose endpoint is the vertex of the angle, and that divides the angle into two congruent angles.

**B** – is any line that intersects the segment at its midpoint.

**C** – is a set of points all of which lie on the same line.

**C A** – are two angles the sum of whose degree measures is 90.

**C A** – are angles that have the same measure.

Notation:  $\angle A \cong \angle B$  (The angles are congruent)

$\angle A = \angle B$  (The measures of the angles are the same number)

**C** – are segments that have the same measure.

:  $\overline{AB} \cong \overline{CD}$  (The segments are congruent)

= (The measures or distances are the same number)

– is a triangle that has two congruent sides.

— is the distance between the endpoints.

– is a set of points consisting of two points on line, called endpoints, and all points on the line between the end points

– are two adjacent angles whose sum is a straight angle.

– is a line segment that joins any vertex of the triangle to the midpoint of the opposite side.

– is the point of that line segment that divides the segment into two congruent segments.

**B** – is a line, line segment, or ray that is perpendicular to the line segment and bisects the line segment.

– are two lines that intersect to form right angles.

**A** – an angle whose degree measure is 90.

– is a triangle that has one right angle.

**A** – is an angle that is the union of opposite rays. It is also an angle whose degree measure is 180.

**A** – are two angles the sum of whose degree measures is 180.

– is a polygon that has exactly three sides.

**A** – are two angles in which the sides of one angle are opposite rays to the sides of the second angle.



Theorem  $\exists$  is a statement that is proved by deductive reasoning.

### Theorems

1. If two angles are right angles, then they are congruent.
2. If two angles are straight angles, then they are congruent.
3. If two angles are complements/supplements of the same angle, then they are congruent.
4. If two angles are congruent, their complements/supplements are congruent.
5. If two angles form a linear pair, they are supplementary.
6. If two angles are vertical angles, then they are congruent.
7. If two sides of a triangle are congruent, then the base angles opposite these sides are congruent.
8. The base angles of an isosceles triangle are congruent.

### Postulates and Theorems that help prove two triangles congruent

1. Side  $\exists$  Angle  $\exists$  Side Postulate : Two triangles are congruent if two sides and the included angle of one triangle are congruent respectively to two sides and the included angle of the other.
2. Angle  $\exists$  Side  $\exists$  Angle Postulate: Two triangles are congruent if two angles and the included side of one triangle are congruent respectively to two angles and the included angle of the other.
3. Side  $\exists$  Side  $\exists$  Side Postulate: Two triangles are congruent if the three sides of one triangle are congruent